AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (Currently Amended) A process for operating a wear-afflicted display ~~(1), in particular a plasma display panel or an organic display,~~ having defined pixels, in which each pixel is assigned a memory address in a memory element ~~(3) in order~~ to record the operating time of each pixel and is ~~furthermore~~ integrated over the operating time and operating intensity ~~in order~~ to determine a pixel wear value (R^{int}, G^{int}, B^{int}) and in which a pixel wear value~~, and/or a characteristic that is proportional to the respective pixel wear values, and afterward an individual pixel correction value (R^{kor}, G^{kor}, B^{kor}) is generated based on an evaluation of the respective pixel wear values by means of at least one logic element (2) for an equalization of the pixel wear, wherein it is differentiated for each pixel with regard to the basic colors red, green, and blue, and accordingly at least one separate pixel wear value (R^{int}, G^{int}, B^{int}) is determined for each of the three basic colors and/or at least one characteristic that is proportional to the respective pixel wear values is determined for each basic color, and these are then stored in the memory element (3), whereupon the memory element (3) is divided into a volatile and a non-volatile memory (5 and 6) or into a fast and a slow memory, pixel wear values (R^{int}, G^{int}, B^{int}) are measured in a first process step by integrating the individual pixel wear over the individual pixel operating time, are then written into the volatile memory (5) in a first storage step, are forwarded from there into the non-volatile memory (6) in a second storage step, pixel correction values (R^{kor}, G^{kor}, B^{kor}) are then calculated by means of the logic element(s) (2) while taking into consideration these pixel wear values (R^{int}, G^{int}, B^{int}) in a second process step that is temporally decoupled from the first process step, and from these are again calculated corrected pixel values (R', G', B'), with which the display (1) can then ultimately be controlled~~ is stored for each pixel

in the form of a non-volatile stored pixel wear value (R^{vn}, G^{vn}, B^{vn}) in a non-volatile memory for each of the three basic colors including red, green, and blue, while the non-volatile stored pixel wear value (R^{vn}, G^{vn}, B^{vn}) is obtained as a sum of the most significant bits integrated over the operating time of the pixel of a pixel wear value (R^{vf}, G^{vf}, B^{vf}) that is volatile stored in a volatile memory,

wherein the less significant bits of the volatile stored pixel wear value (R^{vf}, G^{vf}, B^{vf}) are retained unchanged in the volatile memory.

2. (Currently Amended) ~~The~~A process ~~of claim 1, wherein the non-volatile memory (6) is connected as overflow behind the volatile memory (5) or is connected partially or completely overlapping from behind the volatile memory (5)~~ for operating a wear-afflicted display having defined pixels, in which each pixel is assigned a memory address in a memory element to record the operating time of each pixel and is integrated over the operating time and operating intensity to determine a pixel wear value (R^{int}, G^{int}, B^{int}) and in which a pixel wear value is stored for each pixel in the form of a non-volatile stored pixel wear value (R^{vn}, G^{vn}, B^{vn}) in a non-volatile memory for each of the three basic colors including red, green, and blue, while the non-volatile stored pixel wear value (R^{vn}, G^{vn}, B^{vn}) is obtained as a sum of the most significant bits integrated over the operating time of the pixel of a pixel wear value (R^{vf}, G^{vf}, B^{vf}) that is volatile stored in a volatile memory,

wherein a correction value (R^{kor}, G^{kor}, B^{kor}) for correcting the respective pixel signal (R, G, B) that is individual to each pixel is stored in the same memory cell (R^{vf}, G^{vf}, B^{vf}) of the volatile memory as the volatile stored pixel wear value (R^{vf}, G^{vf}, B^{vf}), and a characteristic that is proportional to the respective pixel wear values is stored in addition or alternatively to

the pixel wear values.

3. (Currently Amended) The process of claim 1~~ or 2, wherein a continuous data transfer is carried out from the volatile memory (5) into the non-volatile memory (6) and/or vice versa~~, wherein a complete transmission of the data that are retained in the volatile memory is carried out in the non-volatile memory when the display is turned off.

4. (Currently Amended) The process of ~~claim 3, wherein a preferably complete transfer of the data that are stored in the volatile memory (5) into the non-volatile memory (6) is carried out when the display (1)is turned off~~claim 1, wherein the data that are retained in the non-volatile memory are rewritten into the volatile memory when the display is turned on.

5. (Currently Amended) The process of ~~claims 3 or 4, wherein the data that are stored in the non-volatile memory (6) are rewritten into the volatile memory (5) when the display (1) is turned on~~claim 1, wherein the display is operated first uncorrected and then, after the data has been completely rewritten from the non-volatile memory into the volatile memory, the display is operated with the corrected pixel data (R', G', B') when the display is turned on.

6. (Currently Amended) The process of ~~one of the preceding claims, wherein the display (1) is operated first uncorrected and then, after the the data has been completely rewritten from the non-volatile memory (6) into the volatile memory (5), the display (1) is operated with the corrected pixel data (R', G', B') when the display (1) is turned on~~claim 1,

wherein one or several SDRAM components are used as the volatile memory.

7. (Currently Amended) The process of ~~one of the preceding claims, wherein one or several SDRAM component(s) are used as volatile memory (5)~~claim 1, wherein at least one of flash components, MRAM, FRAM, FeRAM, RRAM, and PCM components is used as the non-volatile memory.

8. (Currently Amended) The process of ~~one of the preceding claims, wherein one or several flash component(s) and/or MRAM, FRAM, FeRAM, RRAM, or PCM component(s) are used as non-volatile memory (6)~~claim 1, wherein the respectively recorded volume of data is reduced by one of

reducing the accuracy of the recorded pixel wear values (R^{int}, G^{int}, B^{int}) or that of the characteristics that are proportional to them, and

storing a difference value between the respective pixel wear value (R^{int}, G^{int}, B^{int}) and a predeterminable maximum pixel wear value.

9. (Currently Amended) The process of ~~one of the preceding claims, wherein the corrected pixel data (R', G', B') comprise a large data width, and have consequently a better color resolution than the original forwarded pixel data (R, G, B)~~claim 1, wherein the intensity of the individual pixels is increased or decreased separately for each of the basic colors red, green, and blue, in dependence upon at least one of respective individually stored pixel wear values (R^{int}, G^{int}, B^{int}) and characteristics that are proportional to these.

10. (Currently Amended) The process of ~~one of the preceding claims, wherein the respectively recorded volume of data is reduced, in particular by reducing the accuracy of the recorded pixel wear values (R^{int}, G^{int}, B^{int}) or the characteristics that are proportional to these, and/or by storing a difference value between the respective pixel wear value (R^{int}, G^{int}, B^{int}) and a predeterminable maximum pixel wear value~~claim 9, wherein the increase or decrease of the intensity of the individual pixels is carried out one of automatically, interactively, and manually in dependence upon predetermined threshold values.

11. (Currently Amended) The process of ~~one of the preceding claims, wherein the intensity of the individual pixels is increased or reduced separately and/or by sections, preferably separately, for each of the basic colors red, green, and blue, in dependence upon respective individually stored pixel wear values (R^{int}, G^{int}, B^{int}) and/or characteristics that are proportional to these~~claim 9, wherein a correction image for the display is generated from the stored pixel wear values or from the characteristics that are proportional to these, whose indication on the display equalizes the individually different pixel wear values with a general wear level.

12. (Currently Amended) The process of claim 11, wherein the ~~increase and/or decrease of the intensity of the individual pixels is carried out automatically, interactively, and/or manually in dependence upon predetermined threshold values~~indication of the correction image on the display is carried out one of automatically, interactively, and manually at predeterminable times in dependence upon predetermined threshold values of the pixel wear value or the characteristics that are proportional to the pixel wear values.

13. (Currently Amended) The process of claim 11 ~~or 12~~, wherein ~~a correction image for the display (1) is generated from the stored pixel wear values or from the characteristics that are proportional to these, whose indication on this display (1) equalizes the different individual pixel wear values with a general wear level~~selected pixels are operated separately to accelerate the equalization of the pixel wear values (R*, G*, B*).

14. (Currently Amended) The process of ~~claim 13, wherein the indication of the correction image on the display (1) is carried out automatically, interactively, or manually at predeterminable times in dependence upon predetermined threshold values of the pixel wear value or the characteristics that are proportional to the pixel wear values~~claim 1, wherein pixel correction data (R^{kor}, G^{kor}, B^{kor}) predetermined by a logic element are added respectively to the red, green, and blue pixel data (R, G, B), and the display is then operated with the correspondingly corrected pixel data (R', G', B').

15. (Currently Amended) The process of claim ~~13 or 14, wherein selected pixels are operated separately very brightly in order to accelerate the equalization of the pixel wear values (R*, G*, B*)~~14, wherein the pixel correction data (R^{kor}, G^{kor}, B^{kor}) are determined with the logic element one of

by evaluating the recorded pixel wear data (R^{int}, G^{int}, B^{int}),

based on the characteristics dependent from these, and

by means of wear characteristic fields stored separately for each of the three basic colors.

16. (Currently Amended) The process of ~~one of the preceding claims, wherein pixel correction data (R^{kor}, G^{kor}, B^{kor}) predetermined by a logic (2) are added respectively to the red, green, [and] blue pixel data (R, G, B), and the display (1) is then operated with the correspondingly corrected pixel data (R', G', B')~~claim 15, wherein the generation of the pixel correction values (R^{kor}, G^{kor}, B^{kor}) is carried out only at defined time intervals.

17. (Currently Amended) The process of claim ~~16, wherein the pixel correction data (R^{kor}, G^{kor}, B^{kor}) are determined with the logic element(s) (2) by evaluating the recorded pixel wear data (R^{int}, G^{int}, B^{int}) and/or based on the characteristics dependent from these and/or by means of wear characteristic fields stored separately for each of the three mentioned basic colors~~15, wherein the determination of the pixel correction data (R^{kor}, G^{kor}, B^{kor}) is carried out in dependence upon at least one of an individual phosphorous characteristic of the display, an overall brightness of the display, an overall brightness of the display in the basic colors red, green, and blue, an operating temperature of the display and a color temperature of the display.

18. (Currently Amended) The process of ~~claim 17, wherein the generation of the pixel correction values (R^{kor}, G^{kor}, B^{kor}) is carried out only at defined time intervals, preferably multiple times during each hour~~claim 1, wherein the display is a master display, the memory element is upgraded in a first step with the volatile and the non-volatile memory, and the display is then additionally operated initially uncorrected with a defined image and is evaluated with regard to the individual wear characteristic of the display, and the individual

pixel wear values ($(R^{int}, G^{int}, B^{int})$ are transmitted to the memory elements, the correction data ($R^{kor}, G^{kor}, B^{kor}$) are determined by means of the logic element(s) that are upgraded if necessary, and are then operated with the corrected image values (R', G', B') to equalize the wear on the display at the individual pixels.

19. (Currently Amended) The process of ~~claim 17 or 18, wherein the determination of the pixel correction data ($R^{kor}, G^{kor}, B^{kor}$) is carried out in dependence upon additional separately predeterminable parameters, in particular the individual phosphorous characteristic of the respective display (1), the overall brightness of the display, the overall brightness of the display (1) in the basic colors red, green, and blue, the operating temperature of the individual display and/or the color temperature of the display (1)~~claim 1, wherein the graphic data shown on the display are scaled by an adaptation of the respectively represented resolution to the format of the physical resolution of the display or by way of the deinterlacing.

20. (Currently Amended) The process of ~~one of the preceding~~ claims 1, wherein the ~~display (1) is a master display, the memory element (3) is upgraded in a first step with the volatile and the non-volatile memory (5 and 6), and this display (1) is then additionally operated initially uncorrected with a defined image and is evaluated in this way with regard to the individual wear characteristic of this display, and the individual pixel wear values ($(R^{int}, G^{int}, B^{int})$ are transmitted to the memory elements (3), the correction data ($R^{kor}, G^{kor}, B^{kor}$) are furthermore determined by means of the logic element(s) (2) that can likewise be upgraded if necessary, and are then operated with the corrected image values (R', G', B') in~~

~~order to equalize the wear on the display at the individual pixels~~adaptation of different width-to-height ratio of the video source and the display is integrated in the logic element as well as in the process.

21. (Currently Amended) The process of ~~one of the preceding~~ claims 1, wherein the ~~graphic data shown on the display (1) are scaled by means of an adaptation of the respectively represented resolution — for instance from the formats VGA, XGA, HDTV, or PAL — to the format of the physical resolution of the display or by way of the deinterlacing~~display comprises a plasma generator, in which the corrected pixel values (R', G', B') determined by the logic element are allocated to the plasma pulse generator and an individual brightness control of the pixels of the display is carried out for each pixel by the plasma pulse generator.

22. (Currently Amended) The process of ~~one of the preceding~~ claims 1, wherein the ~~adaptation of different width-to-height ratio of the video source and display, such as, for example, 4/3 and 16/9, is integrated in the logic element (2) as well as also in the process~~display comprises a plasma pulse generator, in which the pixel correction values (R^{kor}, G^{kor}, B^{kor}) determined by the logic element are allocated to this plasma generator, while the pixel data (R, G, B) are otherwise supplied unchanged to an RGB graphic data input of the display and an individual brightness control of the pixels of the display is carried out preferably for each pixel by means of the plasma pulse generator.

23. (Currently Amended) The process of ~~one of the preceding claims, wherein the~~

~~display (1) comprises a plasma generator (13), in which the corrected pixel values (R', G', B') determined by the logic element (2) are allocated to this plasma pulse generator (13) and an individual brightness control of the pixels of the display (1) is carried out preferably for each pixel by means of the plasma pulse generator (13)~~claim 1 operated in combination with at least one of image shifting, brightness reduction of stills, and the use of inverse images, while the process is operated in the sense of a control circuit that is connected downstream.

24. (Currently Amended) The process of ~~one of the preceding~~ claims 1, wherein the ~~display (1) comprises a plasma pulse generator (13), in which the pixel correction values (R^{kor}, G^{kor}, B^{kor}) determined by the logic element (2) are allocated to this plasma generator (13), while the RGB pixel data (R, G, B) are otherwise supplied unchanged to an RGB graphic data input of the display (1) and an individual brightness control of the pixels of the display (1) is carried out preferably for each pixel by means of the plasma pulse generator (13)~~logic element directly processes multiplexed data.

25. (Currently Amended) The process of ~~one of the preceding~~ claims 1, wherein ~~the process of the invention can be operated in combination with previously known processes, such as for instance image shifting, brightness reduction of stills, the use of inverse images, and other processes, while the process of the invention is operated in each case in connection with the previously known processes in the sense of a control circuit that is connected downstream~~controls for limiting the maximum brightness of the display are taken into consideration in that the process receives the information from the control mechanism of the display and/or reproduces this mechanism and/or carries out the control on its own.

26. (Currently Amended) The process of ~~one of the preceding~~ claims 1, wherein the ~~logic element(s) (2) can directly process the multiplexed data, for instance in connection with the formats LVDS or DVI~~display is activated less within the first operating time at least by sections with the aid of the corrected pixel values (R', G', B') and is only increasingly more frequently activated at a subsequent operating time with the aid of corrected pixel values (R', G', B').

27. (Currently Amended) The process of ~~one of the preceding claims, wherein controls for limiting the maximum brightness of displays (1) are taken into consideration in that the process receives the information from the control mechanism of the display (1) and/or reproduces this mechanism and/or carries out the control on its own~~claim 26, wherein selected pixels are increasingly more frequently activated within the first operating time.

28. (Currently Amended) The process of ~~one of the preceding~~ claims 1, wherein ~~the display (1) is activated less within the first operating time at least by sections with the aid of the corrected pixel values (R', G', B') and is only increasingly more frequently activated over the course of time with the aid of corrected pixel values (R', G', B')~~a process for gamma correction is applied in the logic element and integrated into the process.

29. (Currently Amended) ~~The process of claim 28, wherein selected especially more highly used pixels are increasingly more frequently activated, in particular those having higher values than are possible or allowed within the first operating time~~A wear-afflicted

display having pixels, with a logic element and a memory element, the memory element having a volatile memory and a non-volatile memory,

wherein a pixel wear value (R^{int}, G^{int}, B^{int}) that is individual to each pixel is stored in the volatile memory for each basic color including red, green, and blue,

wherein the pixel wear value (R^{int}, G^{int}, B^{int}) represents one of an operating time and an operating intensity of the respective pixel (R, G, B) of the display,

wherein a pixel correction value (R^{kor}, G^{kor}, B^{kor}) that is individual to each pixel is stored in the volatile memory for each basic color red, green, and blue, for the correction of the respective pixel signal (R, G, B),

wherein the pixel wear value (R^{int}, G^{int}, B^{int}) and the pixel correction value (R^{kor}, G^{kor}, B^{kor}) are stored in the same memory cell ((R^{vf}, G^{vf}, B^{vf}) of the volatile memory, and

wherein characteristics that are proportional to the respective pixel wear values are stored in addition or alternatively to the pixel wear values.

30. (Currently Amended) ~~The process of one of the preceding claims, wherein a process for gamma correction is applied in the logic element(s) (2) and integrated into the process~~A wear-afflicted display having pixels, with a logic element and a memory element, the memory element having a volatile memory and a non-volatile memory,

wherein a pixel wear value (R^{vn}, G^{vn}, B^{vn}) is non-volatile stored in the non-volatile memory for each basic color including red, green, and blue,

wherein the non-volatile stored pixel wear value (R^{vn}, G^{vn}, B^{vn}) corresponds to a sum of the most significant bits of a volatile stored pixel wear value (R^{vn}, G^{vn}, B^{vn}) integrated over the operating time of the pixel, and

wherein the less significant bits of the volatile stored pixel value (R^{vf}, G^{vf}, B^{vf}) are retained unchanged in the volatile memory.

31. (Currently Amended) ~~A wear-afflicted display (1), in particular a plasma display, an LCD display, an LED wall, or an organic display, to which a logic element (2) and a memory element (3) are allocated, the memory element (3) comprising a volatile memory (5) and a non-volatile memory (6), and in which a pixel wear value (R^{int}, G^{int}, B^{int}) that is individual to each pixel or a characteristic that is proportional to these pixel wear values is stored preferably separately for each pixel in the memory element (3) for each basic color red, green, [and] blue of pixel data (R, G, B), and after a corresponding evaluation of the pixel wear values (R^{int}, G^{int}, B^{int}) or the corresponding characteristics with reference to the predeterminable parameters by means of at least one logic element (2) respectively, preferably for each individual pixel, modified or corrected RGB graphic data (R', G', B') are applied on a RGB input (14) of the display (1)~~The display of claim 29, further comprising a plasma pulse generator for controlling a brightness of the display, the pixel correction values (R^{kor}, G^{kor}, B^{kor}) determined by means of the pixel wear values (R^{int}, G^{int}, B^{int}) recorded in the memory element or the characteristic corresponding thereto are forwarded to the plasma pulse generator, while at the same time the otherwise unchanged graphic data (R, G, B) are applied at the RGB input of the display.

32. (Currently Amended) The display of ~~claim 31, wherein a plasma pulse generator (13) is allocated to the display for controlling the brightness of the display (1), in which the pixel wear values (R^{int}, G^{int}, B^{int}) recorded in the memory element or the pixel~~

~~correction values (R^{kor}, G^{kor}, B^{kor}) determined by means of the memory element or the characteristic corresponding thereto are forwarded to the plasma pulse generator (13), while at the same time the otherwise unchanged RGB graphic data (R, G, B) are applied at the RGB input (14) of the display (1)~~claim 29, wherein in the case in which display technologies are used, in which individual colors have different wear characteristics, selected colors are applied with a relatively higher color and/or light component in comparison with the other colors.

33. (Currently Amended) The display of ~~one of the claims 31 or 32, wherein in the case in which display technologies are used, in which individual colors have very different wear characteristics, preferably in connection with a OLED display, selected colors are applied with a relatively higher color and/or light component in comparison with the other colors~~claim 29, wherein the logic of a graphic controller is integrated in the logic element so that the volatile memory for the graphic controller and the logic element are jointly usable.

34. (Cancelled)